

STUDIES IN AUSTRALIAN GRASSES: 2*

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Summary

A new species, *Arthrargrostis aristispicula* is described. New combinations are *Australopyrum velutinum* based on *Agropyron velutinum* Nees, *Austrofestuca pubinervis* based on *Festuca pubinervis* Vickery, *Critesion murinum* subsp. *glaucom* based on *Hordeum glaucum* Steudel and *Elymus scabrurus* var. *plurinervis* based on *Agropyron scabrum* var. *plurinerve* Vickery. *Australopyrum retrofractum* (Vickery) A. Löve and *Agropyron retrofractum* Vickery are synonyms of *Australopyrum pectinatum* (Labill.) A. Löve.

Further investigation of the recently erected genera *Arthrargrostis* Lazarides (Lazarides 1985) and *Austrofestuca* Alexeev (Alexeev 1976) and a scrutiny of the recent taxonomic treatment of the tribe *Triticeae* (Löve 1984) necessitates some nomenclatural changes.

ARTHROGROSTIS Lazarides

In my opinion the genus *Arthrargrostis* as defined by Lazarides in 1985 includes two distinct taxa which should be recognized at species rank. They differ by the degree to which the apices of the upper glume and the lower lemma are extended.

Arthrargrostis aristispicula B. Simon, sp. nov. affinis *A. deschampsii* (Domin) Lazarides sed gluma supera et lemmate inferno ad 2 mm saltem differt. **Typus:** Queensland. Cook District: 4 km from Almaden on Petford road, 17° 22'S, 144° 42'E, 10 Mar 1980, Simon 3598 & Clarkson (holotypus BRI; isotypus CANB).

In *A. deschampsii* the apices are drawn out into a cusp to 0.3 mm long whereas in *A. aristispicula* the apices extend to an arista or short awn at least 2 mm long. The description by Lazarides (1985) is adequate for both species except for the following modifications.

A. deschampsii. Lower glume ca 2.5 mm long, broadly ovate, obtuse to subacute. Upper glume 3-4 mm long with an apical cusp ca 0.3 mm long, with 9-11 ribbed nerves. Lower lemma 4.5-5 mm long with an apical cusp ca 0.3 mm long, narrowly lanceolate. **Figs 1 & 3.**

Specimens examined (all BRI). Queensland. COOK DISTRICT: Lazarides 4212. NORTH KENNEDY DISTRICT: Blake 8159, Blake 13343, Blake 14919. For collecting details see Lazarides (1985).

The holotype (Domin 1209 in PR) was not examined by me, but has been matched with Blake 8159 (from the type locality) at Kew by Dr C.E. Hubbard according to notes of S.T. Blake in BRI.

Furthermore the type description of *Panicum deschampsii* (Domin 1915) refers to the upper glume and lower lemma as being subacuminate, placing it within the limits of my emended description.

A. aristispicula. Spikelets 5.5-7 × 1-1.5 mm. Lower glume 3-4 mm long, including a mucro ca 0.5 mm long, broadly ovate, obtuse to subacute. Upper glume 5.5-7 mm long, including an awn to 2 mm long, with 9-11 ribbed nerves. Lower lemma 6-7.5 mm long, including an awn to 2 mm long, narrowly lanceolate. **Figs 2 & 4.**

Specimens examined (all BRI). Queensland. COOK DISTRICT: Simon 3598 & Clarkson, Blake 13491, Goodall in BRI 028678, Goodall 66. NORTH KENNEDY DISTRICT: Blake 14905, Blake 11704. For collecting details see Lazarides (1985).

Ecology: *A. aristispicula* tends to inhabit wetter areas than *A. deschampsii*.

Etymology: The specific epithet is derived from the aristate to awned apices of the upper glume and lower lemma.

* Continued from Austrobaileya 2: 23 (1984)



Fig. 1. Specimen of *Arthrargrostis deschampsoides* (Blake 8159) from the type locality.



Fig. 2. Holotype of *Arthrargostis aristispicula*.

AUSTRALOPYRUM Á. Löve

When the genus *Australopyrum* was established by Löve in 1984 the two species he accepted in it were *A. pectinatum* and *A. retrofractum* with the latter having two subspecies, subsp. *retrofractum* and subsp. *velutinum*. However, although the author recognized these formal taxa he (Löve, pers. comm.) is of the opinion that the 'three recognized taxa are isolated by geography but strictly autogamous' and he doubts 'that they represent more than geographical races of a single species'. In the light of experimental work this may be shown to be the situation but for the time being the treatment of Willis (1970) and Forbes et al. (1984) seems a preferable course to follow, and to establish names under *Australopyrum* for the taxa recognized by them.

Australopyrum velutinum (Nees)B. Simon, **comb. nov.**

Agropyron velutinum Nees in W.J. Hooker, J. Bot. 2: 417s (1840). *Australopyrum retrofractum* subsp. *velutinum* (Nees) Á. Löve, Feddes Rep. 95: 443(1984). **Type:** Tasmania, Gunn 770, *n.v.*

Australopyrum pectinatum (Labill.)Á. Löve, *loc. cit.*

Festuca pectinata Labill., Nov. Holl. Pl. Specim. 1: 21, t.25 (1805).**Type:** ? *Labillardiere, n.v.*

Agropyron retrofractum Vickery, Contr. New South Wales Nat. Herb. 1: 340 (1951), **synon. nov.** *Australopyrum retrofractum* (Vickery) Á. Löve, *loc. cit.*, **synon. nov.** **Type:** Betche NSW 9116, *n.v.*

AUSTROFESTUCA (Tzvelev)E. Alexeev

When *Festuca* subgenus *Austrofestuca* Tzvelev was elevated to generic rank by Alexeev in 1976, one new combination *A. littoralis* (Labill.)E. Alexeev was made for *Festuca littoralis* and *F. pubinervis* Vickery was placed in synonymy. Although the species the latter name applied to had also not been recognized as distinct from *F. littoralis* by Gardner (1952) the distinction between the two entities was clearly made by Vickery (1939) and both are currently upheld at NSW (S.W.L. Jacobs pers. comm.). A name is thus required for Vickery's taxon under *Austrofestuca*. Although only one species is presently recognised at PERTH, Dr T.D. McFarlane of that institution (pers. comm.) is also of the opinion that two species should be recognized, probably with one (*A. pubinervis*) in Western Australia and the other (*A. littoralis*) in eastern Australia.

Austrofestuca pubinervis (Vickery)B. Simon, **comb. nov.**

Festuca pubinervis Vickery, Contr. New South Wales Nat. Herb. 1: 7 (1939). *Festuca triticoides* Steudel, Syn. Pl. Gram. 315 (1854), non Lamarck (1791). **Type:** Drummond 150, *n.v.*

CRITESION Raf.

The genus *Critesion* Raf. was resurrected and distinguished from *Hordeum* L. by Löve in 1984 on the basis of a fragile rachis and the sterility of the lateral spikelets; the rachis is tough and the lateral spikelets are perfect or male in *Hordeum*. In addition *Critesion* possesses the haplome H, with a genomic constitution H, HH or HHH as opposed to the haplome I, with a genomic constitution I, in *Hordeum*. The distinction between the three species previously called *Hordeum glaucum* Steudel, *H. murinum* L. and *H. leporinum* Link hinges on rather minor characters (anther colour and relative length of the lateral spikelets) and I think they are best treated taxonomically at the rank of subspecies as was done in Flora Europaea (Humphries 1980), although under the genus *Critesion*. Löve (1984) however preferred to keep *C. glaucum* separate on the basis that it is a diploid in contrast to the *C. murinum* complex (*C. murinum* subsp. *murinum* and *C. murinum* subsp. *leporinum*) which is tetraploid.

Critesion murinum (L.) Á. Löve subsp. **glaucum** (Steudel)B. Simon, **comb. nov.**

Hordeum glaucum Steudel, Syn. Pl. Glum. 1:352 (1854). *Hordeum murinum* L. subsp. *glaucum* (Steudel)Tzvelev, Nov. Sist. Vyssh. Rast. 8: 67 (1971). *Critesion glaucum* (Steudel) Á. Löve, Feddes Rep. 95: 440 (1984). **Type:** ? Steudel 383, *n.v.*

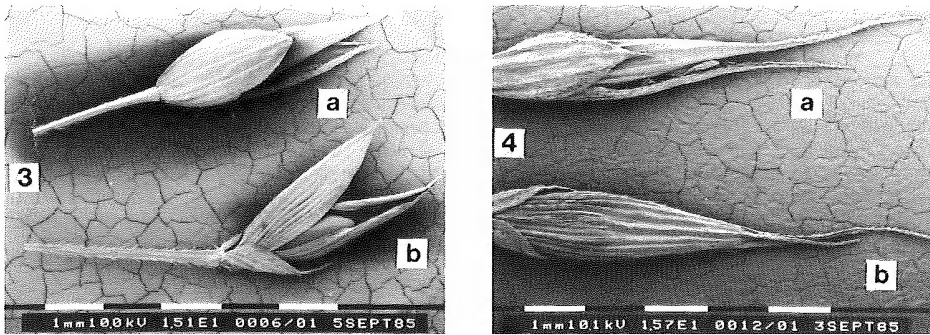


Fig. 3. Spikelets of *Arthrargrostis deschampoides* (Blake 8159) showing a) dorsal and b) ventral views.

Fig. 4. Spikelets of *Arthrargrostis aristispicula* (type) showing a) dorsal and b) ventral views.

ELYMUS L.

A new name is required for the well recognized variety (with 6–8-nerved glumes, 10–15 mm long) of the species widely known as *Agropyron scabrum* (R.Br.)P. Beauv., transferred to *Elymus* by Löve in 1984.

Elymus scabrus (R.Br.) Á. Löve var. **plurinervis** (Vickery)B. Simon, **comb. nov.**

Agropyron scabrum (R.Br.) P. Beauv. var. *plurinerve* Vickery, Contr. New South Wales Nat. Herb. 1: 342 (1951), **synon. nov.** Type: *Thomas* NSW 8245, *n.v.*

Acknowledgements

Thanks are extended to Drs. S.W.L. Jacobs (NSW), T.D. MacFarlane (PERTH) and Á. Löve (San Jose, California) in connection with nomenclatural issues discussed in this paper. However, where nomenclatural changes have been made I carry the sole responsibility for these. I am also grateful to my colleagues Mr R.J.F. Henderson for reading the manuscript and suggesting improvements in content and style and Mr H. Dillewaard for photographic work including S.E.M. photomicrographs with the Indoo-roopilly Agricultural Research Laboratories Philips SEM 505 scanning electron microscope.

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